GRUMMAN
plane
news

Getting ready for building boom in space

- pg. 6

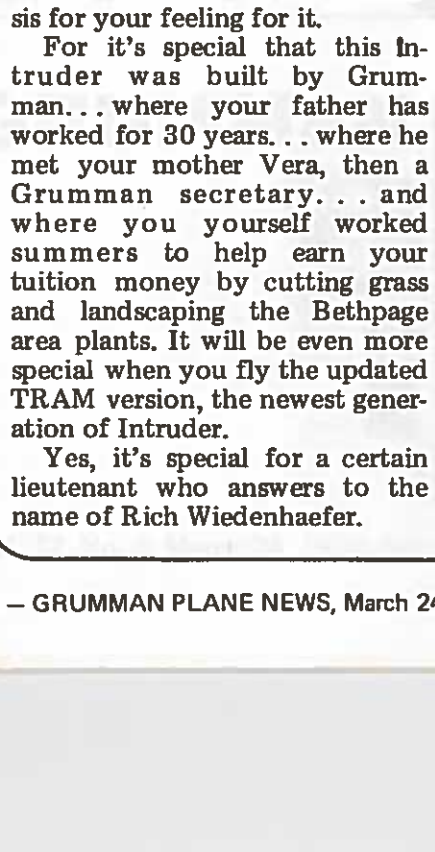
people

You're Rich Wiedenhaefer, Navy pilot. You fly the Intruder for Navy Attack Squadron 176. You've landed this jet on a carrier 150 times and have logged 500 flight hours in it. Not records, certainly, but you've gotta feel this plane's more than metal, plastics and rubber. The aircraft becomes part of your personality. You just can't look at it as an inanimate object. It's special!

It's special, because you've known this plane for more than a score of your 26 years.

It's special, because your father helped plan and build it.

It's special, because you grew up with the models and the drawings and the many modifications. And it became personal when your father, Paul, told an eight-year-old-you, that his fellow Grummanite, Al Kuhn, had given the then A2F its name — Intruder.



License to fly. *When Rich received his 'wings' in 1976, his dad Paul and mom Vera proudly joined in the ceremonies.*

But "Intruder" is the antithesis for your feeling for it.

For it's special that this Intruder was built by Grumman... where your father has worked for 30 years... where he met your mother Vera, then a Grumman secretary... and where you yourself worked summers to help earn your tuition money by cutting grass and landscaping the Bethpage area plants. It will be even more special when you fly the updated TRAM version, the newest generation of Intruder.

Yes, it's special for a certain lieutenant who answers to the name of Rich Wiedenhaefer.

Intruder milestone. *John Wilkens, senior Grumman Field Service representative aboard the USS America, congratulates Lt. (jg) Rich Wiedenhaefer on the occasion of his 500th flight hour in the Intruder. Rich is the son of Paul Wiedenhaefer, director of Interactive Graphics.*

Industry posts

Two Grummanites were recently named to professional posts.

Joe Kingfield, director of Operations Quality, has been elected chairman of the Aerospace Industries Association Quality Assurance Committee for 1978. Last year, he served as Committee vice chairman.

The AIA Quality Assurance Committee is the industry agency responsible for the coordination of new technology and the implementation of Government requirements or standards in the field of quality.

Frank Messina, director of Manufacturing, has been named to the Manufacturing Executive Committee for the Aerospace Industries Association, a national organization comprised of major aerospace companies.

Super Walk

On Sunday, April 16, thousands of Long Islanders will participate in the three Super Walks sponsored by the March of Dimes - Long Island division.

This year, the halfway mark of the 20-mile trek in Nassau will be in the Linden Tree parking lot, Bethpage. Nassau's Super Walk begins and ends at Eisenhower Park, Lot No. 1.

There are two March of Dimes walks in Suffolk County: the East Walk at Southampton College and the West Walk at Hauppauge High School.

Grummanites and their families are invited to participate, either as walkers or sponsors in the annual event. Sponsors donate a certain amount of money per mile. For instance, sponsors can donate 10 cents per mile that their walkers tally to the March of Dimes.

Application forms for Super Walk '78 are available at all Employee Services offices.

New assignments

Among those who recently received changes in assignments were: BETHPAGE OPERATIONS — Richard Wright, manager, Inventory Stock Control, Pl. 2; and Edward Moran will assume the responsibility of Final Assembly day supervisor, Pl. 1; CONFIGURATION/DATA MANAGEMENT DEPARTMENT — Peter Rapelje, M-161 Hydrofoil Program Configuration/Data manager; MANUFACTURING DEPARTMENT — Arthur Deissler, manager, Producibility; and William Hynes, Manufacturing Program manager, Shuttle; and in CALVERTON OPERATIONS — James Lindsay has been appointed to assist Joseph Tagliavia, manager of Off-Site Requirements.

obituaries

STEPHEN J. BAYLIS of QC Tech. Serv., Plant 3, died March 6 at the age of 63. He had been with the company since 1954 and resided at 10 Ellen St., Bay Shore.

GEORGE E. BERLINER of Matl. Handling/Storage, Plant 6, died March 7 at the age of 44. He worked for Grumman since 1959 and lived at 15 Wooded Way, Calverton.

GEORGE J. DUCKETT of A/C Sys. Serv., Plant 94, died March 2 at the age of 50. He had been with the company since 1952 and lived at 440 Centerville Tpke., S. Chesapeake, Va.

LEONARD E. EMEIGH of Prod. Rel. and Analy., Plant 2, died March 2 at the age of 56. He worked for Grumman since 1952 and resided at 614 Kenmore Ave., Copiague.

REINHOLD A. FENSKE of Electronic Test, Plant 14, died February 26 at the age of 65. He had been with Grumman since 1960 and lived at 10 Evelyn Lane, Syosset.

FRANK J. FINNERTY of Tech. Supp., Plant 7, died February 24 at the age of 39. He had been with the company since 1959 and resided in Miller Place.

NELSON SIMPSON of Invent. Plng. and Analy., Plant 30, died February 6 at the age of 42. He worked for the company since 1957 and lived at 1248 Ellis St., Holbrook.

ALBERT A. SMITH of Sys. Test/Flt. Integ., Plant 4, died February 27 at the age of 39. He worked for Grumman since 1963 and lived at 4 Burling Lane, W. Islip.

Personals

I wish to express my sincere appreciation to my many friends at Grumman, Employee Services, and my co-workers in Material Management for their cards, calls, visits, and kind expressions of sympathy during the recent loss of my wife and my near fatal accident. Paul Held and children

We wish to thank Grumman and the Procurement Department, Plant 30, for their kindness and sympathy during our recent bereavement. Bob Cannavale and family

I want to thank the many blood donors who helped my wife Marjorie during her recent sickness. Their caring and thoughtfulness meant so much to us. Russ Robarge and family

Our sincere thanks and appreciation to our friends at Grumman for their support and kind expressions of sympathy during the recent period following the loss of both of our fathers. Alice and George Rooney

My family and I wish to express our appreciation to my fellow workers and Employee Services for their kindness and thoughts in the recent loss of my father. Edward N. Miller

I wish to thank all John's friends at Grumman for their cards, gifts and most especially their concern and affection during his long illness. It helped us both by knowing that so many people cared. John's passing is a loss to many. Joyce Zawyrucha

Our family wishes to thank all our friends, co-workers, and Employee Services for their support and expressions of sympathy during our recent bereavement. The Gregory family

His electronic idea generates top award

Gerry Scannapieco had this problem. Then he got this idea. When his idea was put in actual practice, the solution appeared to be so fuzzy that it was almost unrecognizable. But that idea was responsible for Gerry's first Employee Suggestion award of $1,000 in U.S. Savings Bonds (face value). Gerry heads the February list of 22 Grummanites who were awarded $5,150 in bonds for associated savings of $328,190.

Gerry, a Naval Electronics Warfare Training System (NEWTS) electronics technician, designed a circuit which utilizes two common integrated circuits and a transistor to replace a bulky random noise generator which frequently malfunctioned. This random noise generator had been used to help simulate foreign radar probes on a video display used in trainers.

For example, assume you are playing one of those electronic television games that are becoming so popular — electronic ping pong. You're winning 18-3. Suddenly, the sharp blip you've been unmercifully bashing past your opponent becomes fuzzy and large and your paddle becomes unrecognizable. You see a fuzzy "4" chalked-up for your opponent. He's scored! He keeps serving and wins. Your opponent has been practicing on a fuzzy screen. He's watched that blip grow into a fuzzy wave. He knows exactly where it should be. In a real-life situation, the A-6E pilot, flying at great heights sees just this, a fuzzy screen and he must be able to pin-point where that fuzzy blip should be.

A random noise generator is supposed to simulate the fuzziness on a trainer's video display. Gerry's circuits do just that, far better and much cheaper than the manufacturer's random noise generator. Students learn to see virtually what they will see in actual flight conditions. So Gerry's idea wasn't fuzzy at all.

Bond winner. *Gerry Scannapieco's use of integrated circuitry greatly improved a trainer exercise. For his idea, he won $1,000 in U.S. Savings Bonds. (Photo by Bob Settles)*

Charlie Spencer

Dynamic duo

They say "two heads are better than one" and that's what Marty Foster and Charlie Spencer proved when they suggested a modification to an aircraft fuel leak check on the EA-6B Intruder.

Working together, the Calverton duo formulated a flow chart for a new fuel leak check. The procedure that Charlie, a lead inspection man for the final assembly inspection, and Marty, an inspection final assemblyman, designed, earned each of them $600 (face value) in U.S. Savings Bonds. This new procedure simulates the actual flight configuration; would-be in-flight leaks are discovered and corrected.

Marty, who is currently on temporary duty in Savannah has won $2,250 in awards. Charlie has racked up $950 in Project Sterling awards.

Energy conservation review. *General Bob Curtin (R) (USAF-Ret.), director of NASA Facilities, recently attended a program review in Bethpage of NASA Technical Facilities Energy Conservation Program which Grumman Aerospace's Energy Conservation Group has managed since 1976. Curtin indicated his satisfaction with Grumman's efforts in his conversation with John O'Brien, Senior Vice President-Administration and Resources. (Photo by Fred Annette)*

Other idea winners

Also being awarded bonds last month were:

$700 — Richard Adams/Dennis Tiefenwerth, both of Elect. Cable Fab., Pl. 44.

$400 — David Watson, Ctr. Sect. Assy., Pl. 2.

$300 — Frank Apa Jr., F-14 Aft Assy., Pl. 77.

$275 — Timothy McQueeney, Structures, Pl. 6.

$250 — William Rivers, Parts Paint, Pl. 2; Jim Hopkins, Fluid/Power Pyro., Pl. 25.

$125 — William Brinkerhoff, Mach. Shop, Pl. 2; Charles Heinking, Meas. Std., Pl. 6.

$100 — Edward Vasta, Mach. Parts, Pl. 30; Joseph Mezzatesta, ILS Resource Cntl., Pl. 40.

$75 — Joseph Bisagni, Prod. Rel/Analy., Pl. 43.

$50 — Frank Santagata, Conv. Mach. Pl. 3; Charles Kiesling, Elect. Install.; Edward Miluk, Meas. Std., both of Pl. 6; James Jackowski, Flt. Operator, Pl. 8; William Graham, Elect. Fab., Pl. 43.

Certificate of Excellence: John Koberlein, Equip. Tech. and Fast Sys., Pl. 2; Salvatore Torregrossa, M/T Equip. Engg., Pl. 30.

GRUMMAN plane news

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Capt. Bill Oldmixon -- Navy's man at the helm at Grumman Aerospace

"Okay if I check this out?" asks Capt. William Oldmixon as he climbs into an E-2C.

"You sure can, captain," answers one of the Plant 4 Flight Operations crew, "after all, it's your airplane!"

Capt. Oldmixon is the Naval Plant Representative at Grumman . . . and to Grumman, he *is* the customer. Basically, it is Capt. Oldmixon's job to make sure that what the Navy contracts for, the Navy gets.

The NAVPLANTREP oversees the Grumman-DOD relationship, monitoring the company's performance, scheduling, costs, and product quality. He heads up the Naval Plant Representative Office, supervising the 12 military personnel and over 200 civilians who work in four principal areas: Quality Assurance, Contracts, Engineering, and Industrial Management.

"The Navy and Grumman are both concerned with obtaining the best possible product," says Capt. Oldmixon. "Our personnel in these NAVPRO categories work in partnership with their Grumman counterparts in order to achieve this goal."

- Quality Assurance, headed by Pete Sicardi, is the largest group (about 70 people). "They're the ones who sign on the dotted line and actually accept the product on behalf of the government," says the captain. "They have to insure that the company is complying with contractual requirements relative to quality assurance in all areas . . . electronics, structures, materials and processing, and so on."
- Contracts is directed by Harold Hiller. Personnel in this group attend to the negotiation and administration of contracts, overhead rates, pricing, etc. Says Capt. Oldmixon, "They make sure that whatever we're going to be charged for a product in a given contract is appropriate. In that regard, they work carefully with the other government office here, which is the local Defense Contract Audit Agency office."
- The Engineering group, led by Eli Dombrowiecki, reviews designs and specifications and handles all ECP's (engineering change proposals).
- Dom Granite leads the Industrial Management group. This group has two main functions: production management — monitoring the company's delivery schedules; and the management of government property. "Of the 600 or so acres Grumman occupies here in Bethpage, about 100 acres belong to the government," says Capt. Oldmixon. "The facility at Calverton is a government-owned, contractor-operated plant. . . its official title is Naval Weapons Industrial Reserve Plant. Some of the buildings here in Bethpage are government property, as well as some of the heavy machinery in the machine shops.

Supervising the activities of all four groups, from contract negotiations and engineering change proposals to keeping track of toasters, keeps Captain Oldmixon on a busy schedule.

"The work load is heavy, and there is a fair amount of tension associated with it just because of the volume of business that Grumman does," he says. "But I enjoy it, and I like to keep my day loosely structured so that I can get personally involved in what's critical at the moment."

Test ride. *Captain Bill Oldmixon, the man in the driver's seat for NAVPRO, takes a turn at the controls of an E-2C.*

Top of the list

NAVPRO has the responsibility of flight testing each airplane . . . and that's the part of his job Capt. Oldmixon likes best.

"I spend approximately eight hours a month flying," he says. "I enjoy the administrative part of my work, of course. . . but I look forward to getting away from my desk and the paperwork every so often, spending a few hours checking out an airplane. Obviously, I don't participate in accepting each one. The bulk of flight acceptance is done by our other military flight crew people, both at Bethpage and at Calverton."

In his 24-year Navy career, Capt. Oldmixon has logged over 5,000 hours of air time. Besides the E-2C, he's also flown Grumman's S-2 Tracker aircraft, the C-1A, the Albatross, and other Navy aircraft. "A lot of my time has been in Grumman planes," he says. "I guess that's not surprising, when you consider that so many of the Navy planes over the last 30 years have been Grumman planes. I think that alone speaks for the quality of the product.

"Of all the contractors in the country, Grumman has the most visibility in the aviation part of the Navy," the Captain comments, "because they build four key systems for us.

"Grumman has a reputation for quality that's well warranted. They've got the Navy well equipped, with the F-14, the A-6, the EA-6B, and the E-2C — all of which are super weapons systems. From an operational capability and a quality standpoint, there are simply none better anywhere."

As NAVPLANTREP, Capt. Oldmixon says he has been impressed by Grumman's commitment to delivering the best. "For example, the Pride of Workmanship program and the FOD (Foreign Object Damage) program that the company implemented a few years back," he says. "I've gotten a lot of feedback on them from my Quality Assurance people. They're very enthusiastic about these programs, citing a dramatic upswing in quality and performance. The evidence is overwhelming that they've been worthwhile, both from the Navy's and the company's standpoint."

Communication the key

Capt. Oldmixon sees good communication as the key to the success of the Grumman-Navy relationship. "I think a barometer of that communication is that most problems get solved right at the level where they occur, without going up the ranks to senior management," he says.

"Another important part of my job here is to insure adequate communication between the company and the fleet. . . the guys who actually use the airplanes. Our military personnel here attend to most of that. I think that sort of liaison is very important to the company . . . it helps to insure the creditability of its products."

His belief in good lines of communication extends to the way he runs NAVPRO, too. A recent innovation was a general meeting followed by a question-and-answer period for all Navy employees.

"We had the first one in September, in the Plant 35 cafeteria." the captain says. "It went very well, and we've had two since then. We've talked about many things, including training, promotions, employment levels, and various aspects of dealing with the customer. It's been very informative all around — good upward and downward communication."

Capt. Oldmixon has been at Grumman since the summer of '76, but his term here, and his career with the Navy as well, will draw to a close this summer.

"I'll be leaving in June or July. My plans after that are indefinite, but the idea of moving to New England is attractive right now," he says. The captain and his wife Sue have six children, five girls and one boy, ranging from four to 16 years of age.

"In my 24 years in the Navy, it's been three years here, two years there. We're all looking forward to settling down someplace and staying there."

"Working with Grumman has been a rewarding experience for me," says Capt. Oldmixon, "and I'm sure whoever takes over the reins this summer will find it a challenging, stimulating assignment. I know I'm going to miss it."

service milestones

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Edward J. Lomot, Alodine (2)
Stephen Focardi, Mech. Struct. and Proto (5)
Edward E. Avery, Elect. Install. (6)
Edward J. Braja, Flt. Dev. Ops. (7)
Minnie D. Kordula, Invoice Audit (30)

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Frank R. Curcio, Major Assy. (1)
Robert W. VonderLinn, Insp-Tooling (1)
Edward E. McMullen, Prog. Mgt. (1)
Alfred T. Ricco, Controls (2)
Louis LiCausi, Prod-Cntl-Parts (2)
James R. Shedden, Assy. Meth. and Plng. (2)
Francis Pitrello, Tool Cntl. (2)
Theodore W. Wiegardt Jr., Cutter Grinder (2)
John D. Woodworth, Conv. Mach. (3)
Alvin H. Kirschberg, Prod. Supv. (3)
Frank J. Powell, Matl. Offsite Support Cntl. (3)
Bruce N. Tuttle, Admin. Serv. (5)
Eugene J. Toscano, Aero Test (5)
John A. Whipple Jr., Adv. A/C Sys. (5)
Ronald D. Spencer, Dep. Dir., Cust. Reqt. (5)
Sherman B. Carll, Engines (6)
George F. Neyssen, Structures (6)
Alfred R. Stevens, Prod. Mgmt. and Stf. (6)
Anthony M. DeNardo, Final Assy. Insp. (6)
Walter C. Brenner, Prog. Mgt. (25)
Victor J. Sanc Jr., Subcontractor Surveillance (25)
Robert L. Roemer, Prog. Mgmt — F-14A (25)
Richard A. Scheuing, Director, Research (25)
Joseph G. Engstrand Jr., Cntls. and Mechanisms (40)
Robert G. Hughes, A/C Sys. Serv. (40)
Edward J. Arola, Production (88)

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Aladar J. Push, Maint-Facl. (2)
Joseph J. Berlino, Instr. Test (5)
Robert L. Thompson, Propulsion Sys. (5)
Robert Moncsko, Sys. Analy. (7)
Charles A. Guarneri, Environ. Cntl. Des. (25)
William H. Ackerman Jr., Sys. Analy. (25)
Ralph D. Scarborough, Research (26)
Lillian Forbes, Corp. Proc. Ops. (30)
John A. Adornato, Prog. Mgt. (30)
Charles Keenan, Elect. Equip. Des. (43)
Walter L. Harper, Pers. and Admin. (77)

A.J. Push

J.J. Berlino

R.L. Thompson

R. Moncsko

W.H. Ackerman Jr.

R.D. Scarborough

J.A. Adornato

C. Keenan

W.L. Harper

A.J. Gancio

R.K. Gilmore

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Donald F. Dumermuth, ILS Tech. Serv. (1)
Peter O. Crocco, Maint-Rearrangement (1)
Herbert H. Fishkin, Veh. Liaison Engg. (1)
Joseph F. McDonald Jr., Ctr Sect-Sub-Assy. (2)
Charles H. Vernon, Hydraulics (2)
Robert W. Prais, Dep. Dir. Manufacturing (2)
Donald A. Maynard, Form Block (2)
Clarence J. Heagney, Cent. Storage (2)
Oscar H. Schaefer, Optical Tool and Metrology (2)
Karl R. Herrnkind, Food Serv. Acct. (2)
Alois L. Gross, Conv. Mach. (3)
Alan P. Frost, Engraving (3)
Edward P. Anuszewski, N/C Mach. (3)
Robert O'Keeffe, Assy. Tool and Hand. Equip. (3)
Arthur K. Marquardt, Maint-Rearrangement (3)
LeRoy E. VanCott, Veh. Liaison Engg. (3)
Michael Shaffron, BPA Qual. Engg. Prod. Supp. (3)
Lawrence J. Engel, Static Test (5)
George H. Hammelman Jr., Environ. Cntl. (5)
John Calandra, Prod. Dev. Cent. (5)
Richard A. Rate, Support (6)
Walter E. Herr, Matl. Coordination (6)
George V. Judge Jr., Prop. and Fluid Sys. Prd. Supp. (6)
Paul R. Waisanen, FFT Flt. Dynamic and Load (7)
Gaspar L. Sala, Corp. Instr. Sys. (7)
Peter S. Kraus, QC Lab. (10)
Nicholas J. Peluso, Trans-Ops. (20)
Roy R. Handwerk, Land. Gear Carrier Suit/Arm. (25)
Lawrence J. Moran, Traj/Nav. and Guidance Analy. (25)
Hamilton W. Stiles Jr., Stability and Cntl/Fly Qualt. (25)
Peter J. Daly, Prog. Plng. Cntl. and Budg. (25)
John J. Carroll, Config. Data Mgmt. (25)
Michael T. Leogrande, Maint. Admin. (30)
Joseph V. Trippodi, Cntls. and Mech. (35)
Paul Grinoch, Research Mgmt. and Stf. (35)
Melvin Paiken, ILS Sys. Des. Engg. (36)
Charles Selltitz, ILS Elect. Engg. (40)
James J. Williams, Sys. Engg. Proj. Engg. (40)
Robert S. Keiser, ILS Estimating (40)
Lester J. Grey, Prod. Supv. (43)
David J. Baxter, Engineering (88)
Theophilos F. Tartas, Production (88)
Charles P. Farrell, Production (88)

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Joseph S. Blanche, Sub-Assy. Maj. (1)
Frank W. Abbondondolo, Sub-Assy. Maj. (1)
Frank A. Laplaca, Tool Maint. (1)
Raymond M. Morelli, ILS Tech. Serv. (1)
Barnett L. Eighmey, ILS Resource Cntl. (1)
Francis A. Struzinski, ILS Verif. & Supp. (1)
Grover C. Hart, ILS Reqt. Def. (1)
George R. Zang, ILS Rf/Cntls. (1)
Seymour I. Itkowitz, ILS Digital Engg. (1)
William S. White, Tech. Req. (1)
Joseph F. Sansotta, Veh. Liaison Engg. (1)
Ernest P. Bubek, ILS Estimating (1)
John R. Dorn, Insp-Mech. (1)
John J. LaRusso, Alodine (2)
James J. Albertson, Steel Pts. Assy. (2)
James Brown, Propulsion Test (2)
George E. Boyle, EB Weld. Prod. (2)
Francis A. Hayden, Matl. Mgt. M/S (2)
Oscar K. Bos, Mach. Shop (2)
Charles Martin, Form Block (2)
John S. Reid, Trans-Ops. (2)
James A. Spencer, Industrial Safety (2)
John K. Lee, Drafting (2)
Charles P. Kulik, Conv. Mach. (3)
Philip Nadrich, Honeycomb Prefit (3)
Joseph S. Brandejsky, Mach. Oper. (3)
Donald J. Gibson, Mach. Oper. (3)
Donald J. Miller, Trans-Ops. (3)
Arthur M. Hagendorf, Sys. Test/Flt. Integ. (4)
Joseph S. D'Angelo, Drafting (4)
Beatrice J. McArdle, Airport Ops. (4)
Charles E. Miller, Static Test (5)
William A. Thorne, Instr. Test (5)
James F. Conlan III, Prod. Supv. (5)
Joseph M. Tinto, ILS Prog. Mgt. (5)
John R. Keenan, ILS Prog. Mgt. (5)
William C. Cleary, Admin. Serv. (5)
John H. Boles, Presentation Serv. (5)
Ronald F. Kocka Sr., Environ. Dynamic Test (5)
Thomas G. Davin, Performance (5)
David K. Reichel, Performance (5)
Rocco N. Ambruso, Fluid Mechanics (5)
Herman P. Boyle, Drafting (5)
John Papile, Drafting (5)
Edward H. Schembor, Ops. Anal. (5)
Patricia M. Andrews, Financial Op. (5)
Peter Guthmann, Offset Dev. (5)
Rigmor P. Sperry, Finance Dept. (5)
Alexander Harrisiadis, Corp. Contracts (5)
Robert C. Service, Corp. Plng. Cntl. and Budg. (5)
John W. Sigismund, Facl.-Maint. (6)
Roger L. Copenhaver, Employee Serv. (6)
Heinrich Themann, Fluids (6)

(Continued on page 10)

letters

Dear editor,

Great—make it a kilogram cake, but make it possible (January issue of PLANE NEWS). Instead of your recipe try: 150°C for the oven temperature (comes out to 302°F). Then cream 1/4 liter of butter, 1/3 liter sugar and 5 mil. of vanilla. Beat in your five eggs, fold in 1/2 liter cake flour and 1-1/4 ml. salt.

Tom Attridge

Dear editor,

In your article about the snowstorm "Larry" you wrote that the windshield wipers froze. Years ago when I did not have a heater in the car, I would put glycerine on the windshield cleared of ice, and the wipers would work well. Why not try it the next time. I'm only trying to help.

Yours truly,

Joseph Schoenstein
Sound Beach, Fla.
Retiree from Calverton

Editors note: Thanks for the tip, Joe. It came in handy during the six-inch snowstorm, on Friday, March 3.

Sky is the limit

Grummanites have long regarded space exploration with a certain degree of affection. Many here still remember vividly when the whole place crackled with the excitement of landing a man on the moon.

That feeling of high adventure may never again be experienced, but the day might not be very far off when Grumman is once again solidly in the space business.

With the advent of the Space Shuttle, and with it the possibility of living and working in space, the United States is on the threshold of a new era in space exploration. We have grown from being explorers — gropers in the universe, so to speak — to pioneers who are learning how to live and work far away from our natural environment.

The Shuttle Orbiter, a reusable spacecraft that is launched as a rocket and lands as an airplane, can haul 65,000 pounds of cargo into space, and will reduce the cost and increase the effectiveness of using space for commercial, scientific, and defense needs. Developments made possible by the Shuttle may change the way we communicate, battle the weather, power our planet, and combat disease. And Grumman is assisting the National Aeronautics and Space Administration (NASA) in bringing these plans to fruition before the end of this century.

In the early stages of its operation, in the early 80's, the Shuttle will be used to conduct a variety of experiments that will help to outline its future potential. One plan is for it to act as a "repair truck" for satellites, enabling the Shuttle crew to check out and repair equipment in orbit, or bring it back to earth for further work. Before the Shuttle, malfunctioning satellites had to be written off, usually at a loss of millions of dollars.

But perhaps the most exciting use of the Shuttle involves the fabrication of large space structure which could extend for miles, in such fields as communications satellites and solar energy stations.

"When we talk about large space structures," says Don Imgram, director of Space Programs, "we're talking about structures that are too large to be assembled here on earth and transported. NASA believes that in the future it will be advantageous to transport materials to space and do the actual fabrication up there. The Shuttle will enable us to do this."

What's up next

At present, Grumman Aerospace has already completed or now has underway 17 NASA and Department of Defense (DOD) contracts for the design and analysis of large space structures and related projects. In addition, Grumman is sponsoring a number of its own research and development projects, putting financial and human resources into areas that show promise for the future.

Grumman's optimism is strengthened by the acceptance by NASA of two of its early designs for space construction equipment that demonstrate the feasibility of building in space.

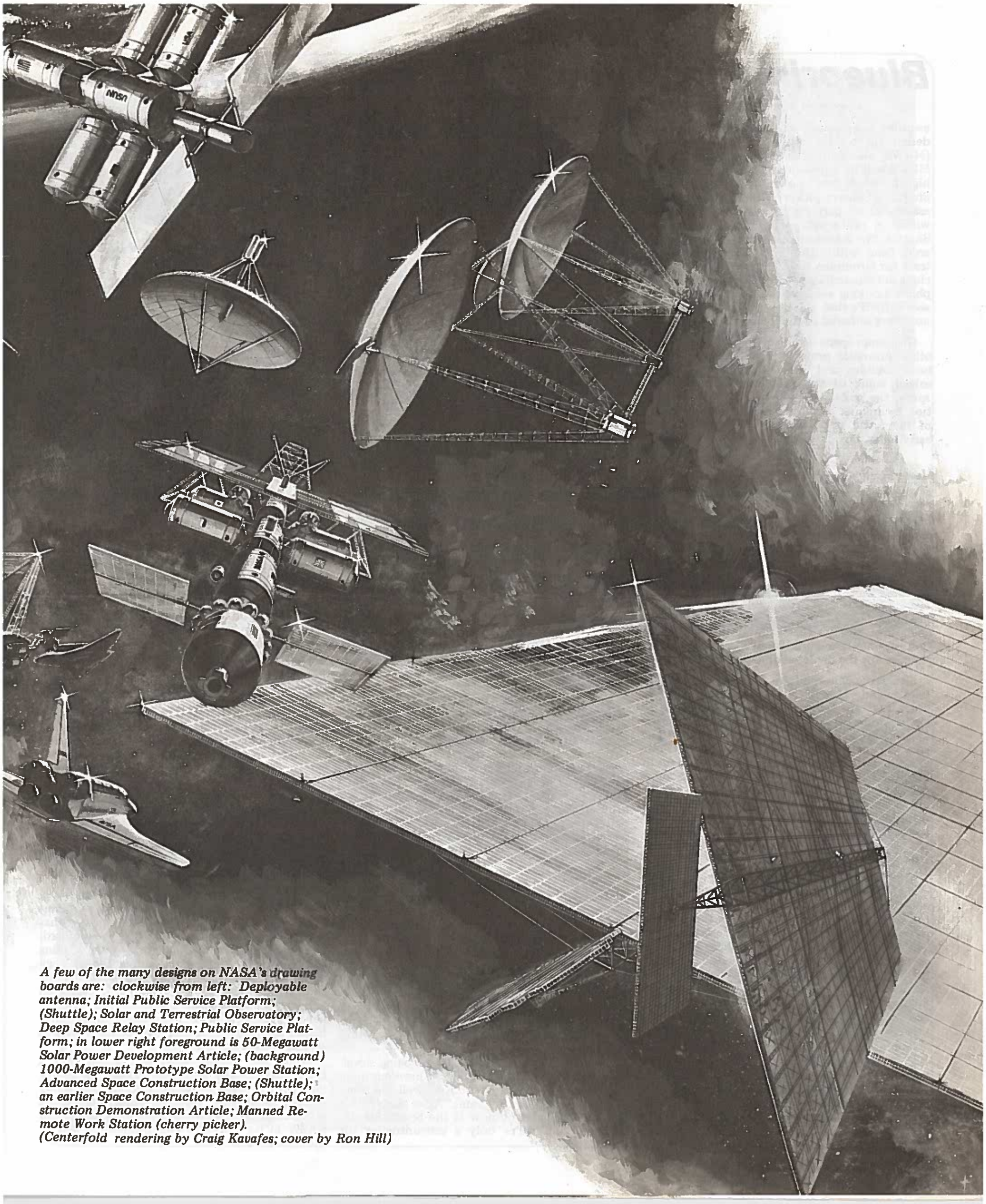
One is the Space Fabrication Module (also called the beam builder) which is secured in the cargo bay of the Shuttle. In low-earth orbit (about 200 miles up), the fabrication module produces beams of varying lengths that look like pieces of some giant erector set. From these aluminum or composite beams, large space structures can be assembled.

"The beam builder is the first piece of space-based construction equipment that will be developed by NASA," says Imgram.

Grumman received a NASA contract for the design and analysis of the beam builder in 1977, and will complete the phase II contract to manufacture the test article in September, 1978.

A second NASA construction project,

(Continued on page 8)



A few of the many designs on NASA's drawing boards are: clockwise from left: Deployable antenna; Initial Public Service Platform; (Shuttle); Solar and Terrestrial Observatory; Deep Space Relay Station; Public Service Platform; in lower right foreground is 50-Megawatt Solar Power Development Article; (background) 1000-Megawatt Prototype Solar Power Station; Advanced Space Construction Base; (Shuttle); an earlier Space Construction Base; Orbital Construction Demonstration Article; Manned Remote Work Station (cherry picker).
(Centerfold rendering by Craig Kavafes; cover by Ron Hill)

Blueprints for tomorrow's space construction

(Continued from page 6)

awarded last month, calls for the preliminary design for a Manned Remote Work Station (MRWS, also known as the cherry picker). The MRWS will be a pressurized cabin about 10 feet high by seven feet in diameter, attached to the Shuttle in cherry-picker fashion. It will enable astronauts to perform construction tasks from within a protected environment outside the Shuttle. The astronaut will operate manipulator arms from within the cabin. A follow-on contract for Grumman to build the ground-test article is anticipated after completion of the design phase. Looking even beyond that, Imgram foresees MRWS's that will be capable of free flight, no longer tethered to the Shuttle.

Grumman space engineers have blueprints for other futuristic projects made possible by the beam builder and the cherry picker. Having solved some of the problems of building in space, the possibilities for utilizing new fabrication techniques seem limitless. Incredibly, many of them will be feasible by the late 80's and early 90's.

Homesteading in space

For example, a plan for an Early Space Construction Base — edging toward NASA's goal of permanent space occupancy. The base will be assembled by the cherry picker from material turned out by the beam builder. It will house five people for 90 days at a time while they supervise manufacturing processes, perform laboratory experiments, and run engineering tests. The base will consist of five sections, or modules. One of the modules will carry food and other supplies to last three months. When the supplies are gone, a new module is exchanged for the depleted one.

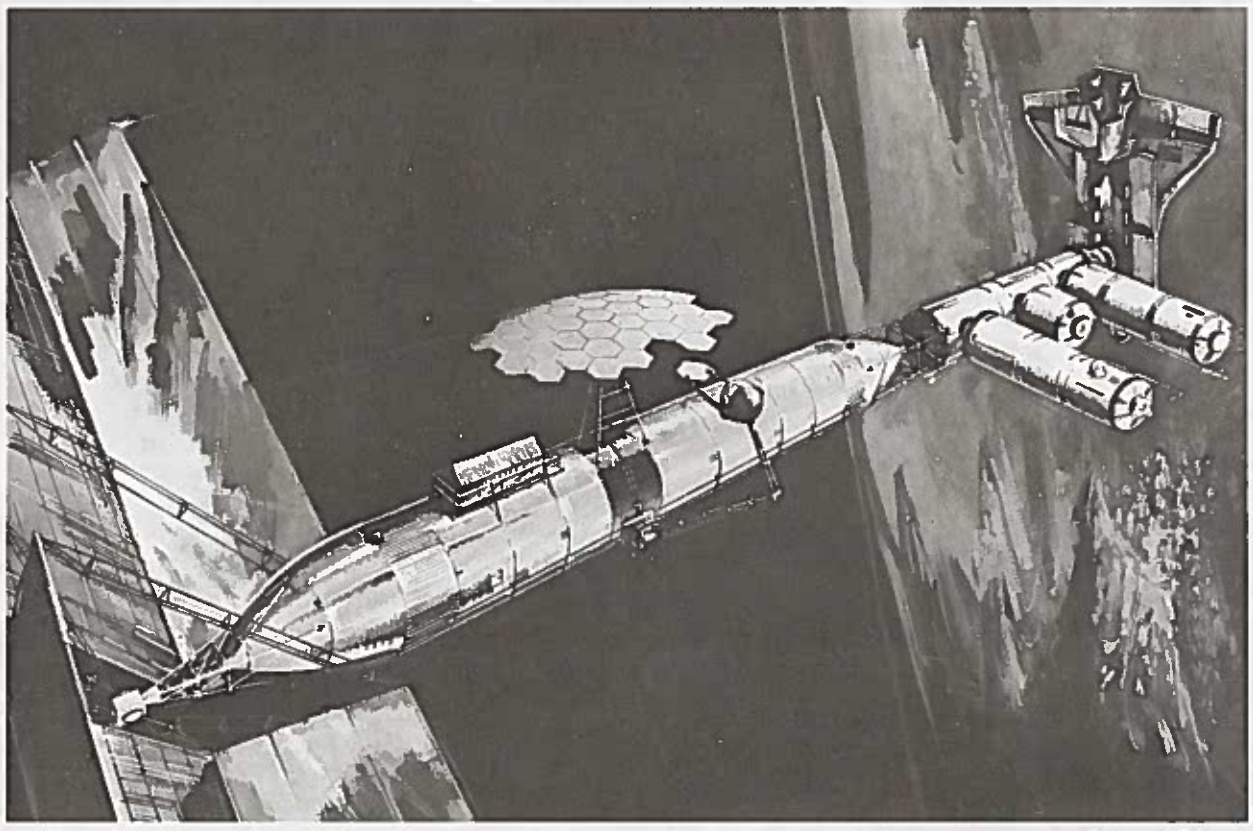
Other possible modules for the Construction Base include pharmaceutical laboratories. Many drugs that are very expensive or impossible to manufacture on earth can be economically made in orbit because of zero-gravity conditions. The anti-coagulant enzyme urokinase is but one example. Urokinase is used for the treatment of blood-clotting tendencies, and one dose of it costs about $1,000. Experiments aboard Skylab in 1973 showed that potential savings from manufacturing this substance in space could lower the price tag to $100 per treatment.

On the drawing boards

Grumman's studies also include:

- **A Public Service Platform.** This structure is envisioned as an ultimate communication system. One proposed design calls for three antennas for voice, video, and data communication. The platform may one day eliminate the tangle of telephone wires across the landscape; direct house-to-house conversations will go through a satellite instead of through wires on the ground. Swift communication between disaster workers, and many other public services, would be possible.

- **A Solar Terrestrial Observatory.** This plan is proposed as a long duration (possibly up to 22 years) manned mission to study the interactions between the sun and earth which control our climate and weather patterns. From the vantage point of the observatory, these interactions could be studied to understand long-term effects, such as droughts and temperature cycles.



Antenna for tomorrow. *Among the possibilities foreseen by Grumman Space Programs is the construction of a Public Service Platform by a man-tended remote manipulator, shown here anchored to the Space Construction Base. (Rendering by Bud Parke)*

- **A Solar Power Satellite.** Depletion of fossil fuels will make it necessary for us to look to new sources of energy before the end of the century. One approach is for a solar power satellite to capture power from the sun and transmit it to earth with microwave beams. The satellite would be positioned in geosynchronous orbit, 22,300 miles high, where satellites move synchronously with the earth's rotation and can be placed to stay over a selected area on the planet's surface.

In geosynchronous orbit, satellites are not affected by the atmosphere or the day-night cycle. The plan is environmentally attractive and technically feasible. According to Imgram, Grumman has talked with several companies overseas who are interested in a joint venture in solar energy in the near future.

But Grumman faces stiff competition from other aerospace companies — Rockwell, McDonnell Douglas, Martin-Marietta, etc. — for hardware contracts for space structures and manufacturing equipment.

Space line-up

How does Grumman stack up against the competition now?

"Grumman enjoys a reputation as a solid manufacturer and designer of structural components. All our aircraft are superb pieces of machinery," says Imgram. "We also have the investment and experience in the field of composite materials, which will be very important in space structures. That, plus our background in manned space flight, will enable us to present a strong competitive position in future space developments.

"In terms of current hardware being developed right now, we simply don't have anything on the line to compare with Rockwell and some of the others," says Imgram. "After all, NASA's biggest project right now is the Space Shuttle program, and we're only a subcontractor for that effort.

"But for studies, preliminary designs, and advanced concept work, we're winning more than our share of contracts in direct competition with other industry giants.

"Because we don't have that much active hardware in the works right now, we can apply our best engineering talents in programs where we're looking toward the future."

At last check, there are still thousands of men and women at Grumman who have worked on the Lunar Module and OAO (Orbiting Astronomical Observatory) programs.

Imgram points out that Grumman can be proud of its performance as a subcontractor to Rockwell, building the Shuttle wings. Rockwell has a system of presenting merit awards according to the performance of the subcontractor. For the past three reporting periods, Grumman has received excellent ratings . . . and, for the period ending in the last months of 1977, according to Imgram, Grumman received the highest rating ever awarded to a subcontractor on the Shuttle program.

Prepping for tomorrow

"We'd like to help NASA create the programs of the future," Imgram says, "and the fact that we're performing excellently in a major hardware program is critical in terms of our winning those contracts. With our combination of original designs (such as the beam builder and the cherry picker), and our proven performance on hardware programs, we think we can turn our conceptual work and preliminary studies into future hardware contracts that could be worth several million dollars."

When the Shuttle takes off in the 1980's, Imgram says that NASA will be ready to utilize its capability. And by doing its homework today for the challenging task of tomorrow, Ingram says Grumman can provide valuable assistance to NASA in its long-term commitment to solving the mysteries of space.

Building the first step

It takes a lot of people to make a beam builder. For over a year, design engineers, computer specialists, metallurgists and many others have been putting their minds and their skills together to produce a prototype of the Space Fabrication Module.

In Plant 12 in recent weeks there was an extra flurry of activity as preparations were made for NASA's quarterly review of the project on March 8 and 9. The beam builder had been painted red, white, yellow and blue, the rolling mills of aluminum stock were in place, and the Plant 12 crew was anxious to show it off.

According to program manager Walter Muench, the NASA team was pleased with what they saw. "They were impressed with how much we had accomplished since their last visit in December," says Muench. "The whole review went very well."

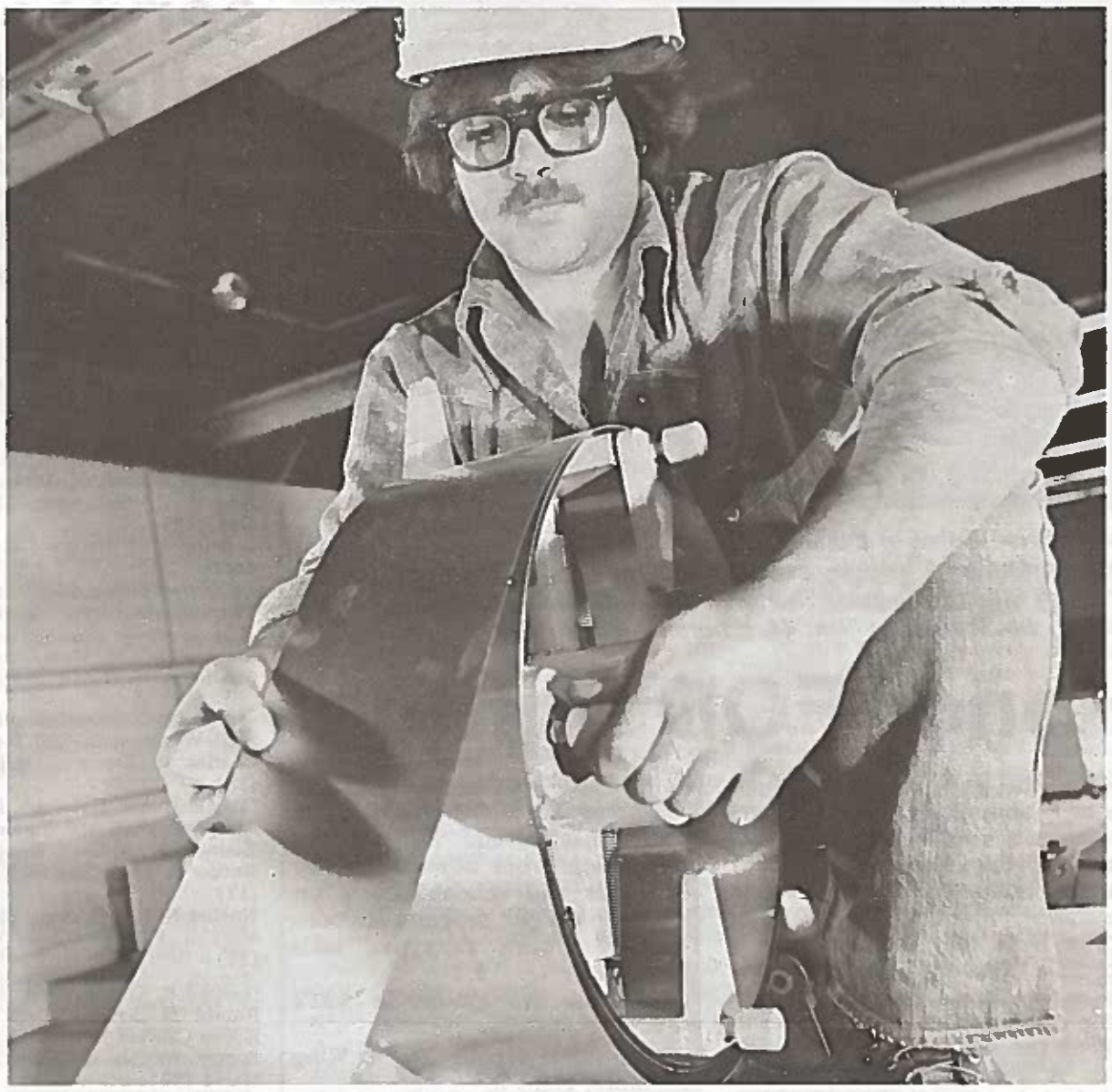
Listening to the Plant 12 team talk about how the beam builder can spit out five feet of beam in three minutes (". . .but we think we can get that even lower. . .") gives the place the atmosphere of being with the guys at the speedshop on a Saturday afternoon. There are deadlines to meet and details to work out, but the camaraderie and enthusiasm make it clear that these are people who really enjoy their work.

Rich Romaneck of Instrument Ground Test who works on the electronics control system for the beam builder says, "We're really excited about it. . . it's a tremendous challenge to start from scratch and make something completely different. And the potential for the beam builder in the space program is tremendous."

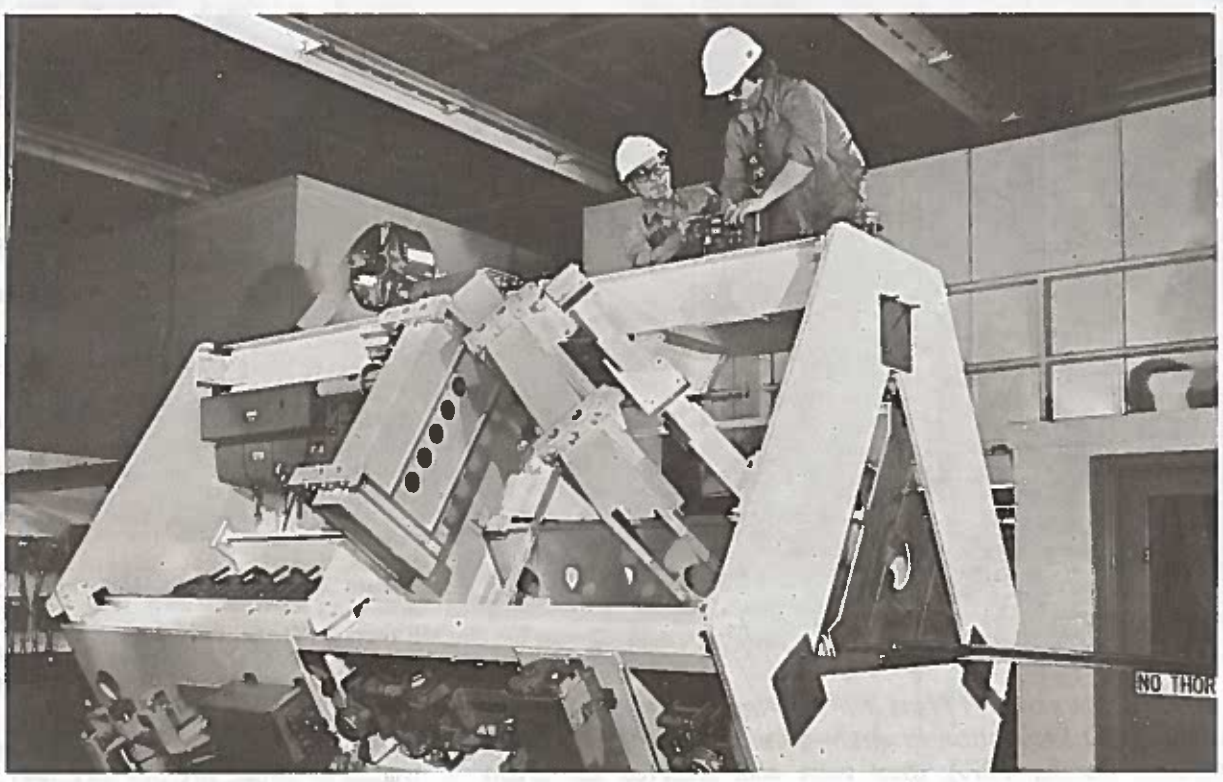
"What we're doing here is very rewarding," says Fred Koch of the Prototype machine shop. "We take a design or a proposal and work it through from concept to finished product. Within certain limitations of size, if they can think it up, we can build it."

Tarvey Giannuzzi and Charlie Johnson mechanical design engineers, are both pleased with the progress of the work so far. "Everything has gone beautifully," says Tarvey. "We're coming down to the wire now, and everything is falling into place."

"That's right," agrees Charlie, "the beam builder is going to be ready to roll by May 1."



Ready to roll. *Mark Lento of Facilities Maintenance prepares a role of aluminum stock for installation in the beam builder. (Photos by Rich Breunig)*



Great River leaders *in fighting FOD recently received recognition for their performance by being awarded the first annual FOD Prevention Program Director's award. The top group in Great River Operations (above) was Material in Plant 44. (Photo by Marie Trimborn)*

Honor FOD fighters

Over the past few years, there has been an ongoing battle between Grumman and FOD (Foreign Object Debris/Damage). At latest count, Grummanites are winning the war.

The FOD that the company is especially concerned about preventing is the debris that accumulates while a plane is on the production line or the kind that is left inside after it reaches the flight line. Debris left in any aircraft during assembly can cause damage to engines and critical systems and could affect safety of flight.

The first annual FOD Prevention Program Directors' awards were recently presented to five groups representing three operational centers.

Red jackets with the FOD Prevention patch were awarded to members of the five top groups for their "outstanding performance in compliance with the requirements for FOD Prevention and Good Housekeeping." Each of the groups had achieved at least one Project Sterling Award for Excellence and additional monthly awards for Good Housekeeping performance in 1977.

"Thanks to all participants — not only these five groups — Grumman is establishing itself as an industrial leader in FOD Prevention," says George Wiesinger, director of Corporate FOD Prevention Program, which supplements the Manufacturing Department's Good Housekeeping Program.

Wiesinger backs up that statement by pointing out that during the past two years, debris discovered during FOD inspection had been reduced to half the amount of the previous year's; major assemblies from feeder to final assembly plants are arriving substantially FOD free; and engine removals due to FOD has halved. "Requests for information from other aerospace companies and subcontractors on Grumman's FOD program are continually being received," adds Wiesinger.

The top five groups in 1977 were:

Bethpage Ops — F-14 Wing Assembly, Plant 3.

Great River Ops — Material, Plant 44.

Calverton Ops — F-14 Station No. 2 Final Assembly, Plant 6; A-6 MOD Station No. 3 Final Assembly, Plant 6; and Fluid Subsystems.

Top team in 1978. *Members of Plant 3 F-14 Wing Assembly captured the first annual FOD Prevention Program Director's award for Bethpage Operations. During 1977, they were also selected as 'Clean Department' seven times. (Photo by Marie Trimborn)*

service milestones

(Continued from page 5)

John J. Ceely, Elect. Install. (6)
Richard R. Allen, Structures (6)
Onofrio C. Tabbitas, Matl. Coord. (6)
Alphonse M. Tetta, Matl. Hand/Storage (6)
Lawrence J. Burke Jr., Matl. & Logistic Mgt. (6)
Frederick L. Horn, Final Assy. Insp. (6)
Salvatore G. Borrelli, Trans-Ops. (7)
Kenneth S. Edwards Jr., Resources (7)
Frederick W. Ellis, FFT Sys. (7)
Hilary L. Hogendorn, Corp., Instr. Sys. (7)

Philip B. Daly, Airport Ops. (7)
Richard M. Collins, QC Lab. (10)
Robert H. Witt, Adv. Matl. & Process Dev. (12)
Guenter H. Baumann, Adv. Matl. & Process Dev. (12)
Louis Freundlich, Meas. Stnd. (12)
Vincent Ramundo, Meas. Stnd. Engg. (12)
Stanley Brooks, Meas. Stnd. Engg. (12)
Charles R. Griffaton, Elect. Test (14)

Joseph N. Cosmo, Hydraulics (14)
Kurt Wassermann, ILS Tech. Writing (15)
Charles P. Kerrigan, ILS Tech. Writing (15)
Gary C. Slater, ILS Tech. Illus. (15)
Joseph T. Diaz, B/P Warehouses (17)
Kenneth J. Ey, Cent. Shipping (17)
Rocco S. Abbondandolo, Cent. Shipping (17)
Norflet N. Reavis, Cent. Shipping (17)
Maryon F. Kowalczyk, Cent. Shipping (17)

Howard R. Chieca, Cent. Shipping (17)
Robert E. Streeter, Cent. Shipping (17)
Rocco Catania, Cent. Shipping (17)
Raymond J. Kirchner, Trans-Equip. Maint. (20)
Frederick A. Thomas, B/P Warehouses (21)
Berthold Bercher, Matl. Shortage Cntl. (24)
Brian W. Brachio, ILS Rf/Cntls. (25)
Harold P. Buck, Dist. Serv. (25)
Martin J. Towey Jr., Crew Sys/Equip. Integ. (25)
Vincent Cirrito, Equip. Therm. Des. (25)
Vincent A. Biagiotti, Struct. Analy. (25)
Stephen R. Post, Computer Interface (25)
Rhys Wass, Specifications (25)
Frank Davies Jr., Engg. Resources (25)
John M. Hormann, Prog. Plng. Cntl. and Budg. (25)
Vincent B. Anella, Config. Data Mgmt. (25)
Raymond F. McGrath, Supply Asset Cntl. (25)
Gerald M. Padawer, Nuclear and Astrophysics (26)
Arline J. Montgomery, Employment (28)
Ellen C. Smedley, Insurance, Records, and Benefits (28)
Edward J. Zarodkiewicz, Reqts. Plng. (30)

Albert F. DeMaeyer, Reqts. Plng. (30)
Daniel F. Canade, Machined Pts/Matl. (30)
Howard R. Houlroyd, Machined Pts/Matl. (30)
Harry C. Fiegerman, Gen. Commodities (30)
Charles H. Gobbi, Cust. Supply Reqts. Mgt. (30)
Leroy J. O'Toole Jr., ILS Supply Ops. Proj. Mgt. (30)
John Walton, Proj. Mgt. (30)
Robert J. Rabell, Mech. Engg. (30)
Sophie T. Agiesta, Invoice Audit (30)
Thomas J. Delaney, Audit Liaison (30)
Bernard C. Fitzsimmons Jr., ILS Estimating (30)
Morton J. Steigman, ILS Sys. Des. Engg. (31)
Abraham Blum, ILS Sys. Des. Engg. (31)
Joseph McCarthy, Software Dev. (31)

Frederick E. Wicks Jr., ILS Resource Application (35)
Bernard H. Beal, Struct. Des. Stf. (35)
Fred A. Wohllebe, Aerodynamic Des. (35)
Robert E. Alloca, Equip. Therm Des. (35)
Mark Kanal, Struct. Analy. (35)
Albert J. Davidson, Redundant Struct. (35)
Martin R. Wohlers Jr., Sys. Sciences (35)
Jean A. Golder, Prod. Supv. (36)
David Hutchison, Invent. Cntl. (36)
Walter R. Mackey Jr., Prod. Rel. and Analy. (36)
Elliott Sussman, Stockrooms (36)
Nicholas A. Loren, Maint-Rearrangement (36)
Gottfried G. Kneips, TS Mfg. Elec. Fab. (36)
Eugene P. Toner Jr., TS Matl. Proc. (36)
Ernest V. Hansberry, TS Engg. Mgt/Stf. (36)

John A. Roecklein, TS Engg. Mgt/Stf. (36)
Vincent Staweck, B/P Warehouses (37)
Robert Volino, Career Ed. and Dev. (39)
George A. Gajewski, Subcontractor Surveillance (40)
Peter A. Perniciaro, ILS Tech. Serv. (40)
Melvyn S. Bomze, ILS Resource Cntl. (40)
Frederick O. Valdez, ILS Reqt. Def. (40)
Carl G. Brodt, ILS Sys. Implementation (40)
James R. Manfredi, ILS Digital Engg. (40)
Alan V. Long, Drafting (40)
Henry Salz, Specifications (40)
Charles R. Carpenter Jr., Specifications (40)
Charles G. Pieroth, Prog. Mgt. Marine (40)
Paul Nakelski, EP Circ. and Mod. Fab. (43)
Louis A. D'Angiolillo, Elect. Box Pan. (43)
Robert Yasinski, Elect. Box Pan. (43)
Donald B. Stein, Guid. and Cont. Sys. Inte. (47)
Robert LaManna, Prog. Mgt. (66)
Fred B. Amos, Opt. Display Navig. (72)
Joseph D. Marino, Sys. Engg. Proj. Engg. (72)
Alice L. Hudgins, Plant Mgt. (77)
Paul A. Christensen Jr., QC Supplier (87)
William A. Zwijac, A/C Sys. Serv. (94)
Morton Danin, Supp. Equip. Serv. (94)

scorecard

The Grumman Iran Hellcat varsity team defeated Bell Helicopter to capture its second straight Esfahan softball championship. To date, the Hellcats post an impressive 55-2 record in Iran. Player-coach Marty Clark predicts the squad may have a little more trouble staying on top this season, since seven of the championship squad are returning to the States.

"But the remaining nucleus have not lost heart," says Marty. "We're working harder than ever with hopes of securing a berth in the New York Metropolitan Tournament—so watch out Long Island varsity!"

Brushing up

Due to the large turnout in recent years at Art Shows, the Grumman Athletic Association is sponsoring lectures on oil and watercolor techniques this Spring.

On Thursday, April 13, accomplished oil painter Ruth Baderian will address Grummanites on the use of oils. The lecture will take place in the Plant 28 auditorium at 5:30 p.m.

One week later on April 20, watercolor artist Al Narizzano will lecture on technique and style used in this medium. This art session will also be held in the Plant 28 auditorium at 5:30 p.m.

Both lectures are open to all Grummanites, their families and Grumman retirees. For additional information, contact the GAA office, Ext. 2133 or 2269.

Grand Ole Opry

The Grumman Athletic Association is offering a week-long trip to Nashville, Tenn., June 27-July 4. The southern excursion costs $262 per-person, based on double occupancy of rooms.

Included in the package are: round-trip deluxe coach transportation; hotels; and admissions to local attractions such as the Country Music Hall of Fame, Grand Ole Opry, etc.; and dinner daily. For more information, contact the GAA office, Ext. 2133 or 2269.

Keglers wanted

The Grumman Gold Mixed Bowling League is concluding its 1977-78 season shortly. Next season's plans include expansion to 14 teams (two males, two females). The new season will begin in September; league action takes place on Wednesdays at 6:30 p.m. in County Line Bowl, Farmingdale. If you are interested in joining, contact Gene Harms, Ext. 4229, or John Klaus, Ext. (115) 6035.

Two-in-a-row. *Members of the Grumman varsity softball team in Iran won their second Esfahan championship: (L to R) standing - Skip Meinhold, Del Foster, Mark Morgan, Dan Cooper, Mike Graziano, Dave Bouse, Marty Clark, Larry White, Deniz Balta, Tom Fullerton; kneeling - Nick Negro, Dan Cooper III, Jack Bacheller, Danny Bacheller, Dave Jahosky, Dave Pfeil, and Gerry Daly. Not pictured: Chuck Hennings, Gary Aguinaga.*

First of many. *Tom Rozzi, Vice President-Personnel Services and Security, buys the first GAA ticket from Chet Baumgartner (L), head of GAA. (Photo by Rich Breunig)*

Become a good sport

If you haven't purchased your 1978 Grumman Athletic Association membership ticket, have no fear. The GAA drive has been extended to April 7, due to the two recent mini-snowstorms, says Mike Cherry, this year's campaign director.

That gives you an extra week to join the wide, wide world of GAA. Though there are plenty of athletic activities, GAA offers more than sports. There are hobby, art, photo and flower exhibits. . .trips to far away places at bargain prices. . .and a wide range of GAA-sponsored clubs. The GAA offers something for everyone.

To become a member of the GAA, it only costs $1. Your membership dollar also entitles you to a drawing for prizes. Fifteen lucky ticket holders will win a $100 U.S. Savings Bond while 50 more will take home a set of Grumman glasses. The drawing will be held on Friday, April 14.

The latest additions to the growing list of 100 percent departments follows:

PLANT 2 - Bethpage Operations Center, Manuf. Status; Bethpage Operations Center, Planning Mgt. & Staff; Industrial Engineering, Crewloading; Detail Parts Planning; I.E. Factory Planning

PLANT 3 - Machine Parts Control; Material Management

PLANT 4 - Flight Transportation; Bethpage Operation Unit; Production Center

PLANT 5 - Final Assembly Structural; Planning; Business Management

PLANT 6 - Calverton Facilities

PLANT 30 - Facilities Administration, Business Management; M/T Equipment Engineering; Process Engineering; Civil Engineering; Mechanical Engineering; Environmental Control; Architectural Engineering; Maintenance Administration

PLANT 33 - Sunstream Manufacturing

PLANT 36 - Production Rel. & Anal.; I.E. PH Support; BOC Industrial Engg.

PLANT 43 - Circuit Analysis; Electrical Box, Panel & Draw Fab.; Plant Management & Staff; Mfg. Production Supervision; Mfg. Requirements Planning; Industrial Engg.; Methods Engg., GSE; Methods Photo/Development; Resources; Administration; Mfg. Technology; Great River Ops, Mgmt & Staff

PLANT 44 - Electrical Harness Fab.; Electrical Cable Fab., Mfg. Production Supervision; Fac. Adm.; Maint. Admin.; Maint. Rearrangement; Maint. Fac. Equip. & Gen.

Play ball!

If the snow ever melts. . .the Grumman softball varsities will begin team try-outs in April.

Men's varsity coach Jack Keane recently announced that those wishing to try-out for a slot on the Grumman Tomcats should fill out the form below and mail it to him, B08-25.

The women's team will begin practicing in the Plant 3 softball field every Tuesday and Thursday in April. For more information, contact Jim Schwab, Ext. 5926.

Men's softball trials

Name_____

Mail Station_____ Plant_____ Dept.___

Ext_____ Position_____

Mail to: Jack Keane, B08-25

Welcome home, No. 27!

On March 1, 1963, Grumman A-6A No. 27 took its maiden flight at Calverton. Fifteen years later — to the day — Intruder No. 27 returned to its birthplace at Grumman Aerospace's final assembly and flight test facility at Calverton.

During the past decade-and-a-half, this A-6A served in numerous Navy and Marine squadrons. From 1970-78, it operated as a training aircraft at NAS Norfolk, Paxtuxent River, and Lakehurst. Then, on March 1, 1978, it arrived back home at Grumman to undergo conversion to the latest Intruder configuration.

The news spread fast that good ole No. 27 had returned and many of the Grummanites who helped build and test fly this die-hard Intruder gathered for a reunion (above). Among the hundreds that had a part in building A-6A No. 27 were: front row (L to R) - Ed Gross, John McCardle, Ladislaus Hanak, Ray Weick, Arnold Arnister, Alfred Stevens, Robert Erickson, Alfred Falkowski, Ken Becker, Emil Urciuoli; back row - John Stecker, Edgar Van Buren, Jack Gamble, Bill Allen, Bill Moylan, Raymond Raynor, Ed Harris, Allen McCaffery, Leon Jasinki, Joel Beach, Ed Clark, and Robert Kobus. (Photo by Karl Thoma)

calendar

Aikido Club: every Mon. and Wed., 5 p.m., Pl. 35 cafe; for sport and self-defense; L.I. Aikido Federation; all guests welcome. B. Bauman, x4636/M. Stock, x7186.

Alcoholics Anonymous: every Mon., 5 p.m., Pl. 15 conference room C; closed meetings; Personnel Relations, x3521; Calverton: every Mon., 4-5 p.m., Headquarters Building; Great River: every Wed., 4-5 p.m., Pl. 43 conference room 3.

ASHRAE: Tues., April 11, cocktail hour 6 p.m., dinner 7 p.m., presentation 7 p.m., Alumni Club, Hofstra U.; L.I. chapter (local); guests welcome. T. Murphy, x5840.

Coin Club (Calverton): every Fri., meas. stds. lab., 2nd floor, E. entrance, Pl. 6; U.S. and World numismatic, medals, tokens collecting of; all welcome. W. Kondratowicz, x(117)6683/J. Kreussling, x(117)6550.

Folk-Dancers Club (Calverton): every Tues. folk dancing, every Thurs., hustle and ballroom dancing; some instructions available; lunchtime, receiving area, Pl. 6; all welcome. E. Urciuoli, x(117)6688.

GACE Flying Club: Fri., April 14, 5 p.m., Pl. 28 auditorium; regular monthly membership meeting; Grand Canyon slide presentation; guests ,welcome. R. Reisch, x3286.

Karate Club: every Tues. and Thurs., 5:30-7:00 p.m., Pl. 35 cafe; building character thru physical fitness; GAC employees and families welcome. H. Dreksler, x8812.

Retiree Club: Wed., Mar. 29, 1:30 p.m., Holiday Manor; local chapter; business meeting. E. Drasser, x2133/2269.

Stamp Club: 1st, 2nd, 3rd, Wed. of each month, 4:45 p.m., Pl. 35 cafe. S. Hoops, x3926.

Grumman Dance Club: every Wed., 5-8 p.m., Pl. 30 cafe; Mar. 29/Apr. 5 swing dancing, Apr. 12 hustle; friends and relatives welcome. E. Murway, x4393/M. Brown, x(115)3777.

Grumman Model Railroad Society: every Wed., 5:30-9:30 p.m., Model RR Bldg. (at Pl. 3 rr crossing); regular monthly meeting; guests welcome; Apr. 1 std mini convention, Garden City Cathed. House; live clinics; guest speaker: Jim Boyd. R. Muntz, x8101.

Grumman Tennis Club: 2nd Wed. of every month, 5 p.m., classrooms A and B, Pl. 5. P. Andrews, x7345.

Grumman Toastmasters Club: Wed., Apr. 5, 5-7 p.m., Pl. 25 conference room A; regular program for "Personal Growth and Enjoyment;" Grumman and NAVPRO personnel welcome. J. Allison, x3475.

Guess who?

The cover of the March 3 issue of PLANE NEWS featuring the 1978 GAA membership drive sparked a series of inquiries about who the athletic models were.

They were Edgar Mills and Nancy McIntyre, both of Presentation Services. Photographer and co-worker Rich Breunig offered the modelling job to them, and they both accepted like good sports. For Nancy, it was her first appearance in PLANE NEWS. But Edgar considers himself a veteran having appeared in last year's article on Industrial Security as "Sam Spade."

GRUMMAN plane news

ADDRESS CORRECTION REQUESTED

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